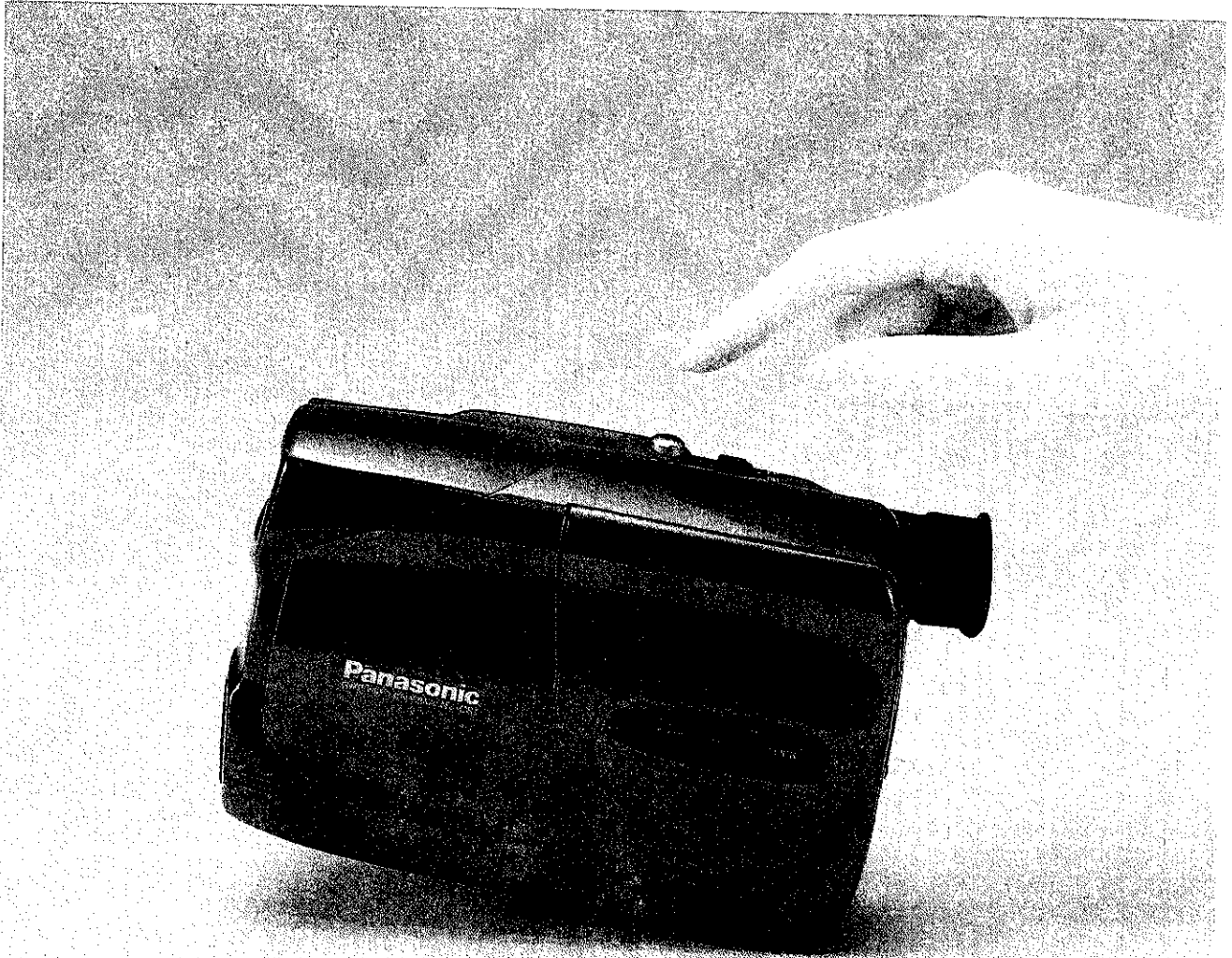


Panasonic

Snap Video Camera
NV-CS1A
Operating Instructions



• • • •
snabcorder
CS1



Before attempting to connect, operate or adjust this product, please read these instructions completely

VQT5328

Information for Your Safety

IMPORTANT

Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

WARNING

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

Snap Video Camera

- The rating plate is on the bottom side of the Snap Video Camera.

AC Adaptor

- The rating plate is on the bottom side of the unit.

FOR YOUR SAFETY

■ DO NOT REMOVE THE OUTER COVER.

To prevent electric shock, do not remove the cover. There are no user serviceable parts inside. Refer servicing to qualified service personnel.

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

IF THE SUPPLY CORD OF THIS EQUIPMENT IS DAMAGED, IT MUST BE REPLACED BY THE SPECIAL CORD.

CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

Before using the Snap Video Camera for the first time, please read these Operating Instructions carefully, especially the Cautions on page 18 and thereafter. Keep these Operating Instructions handy for future reference.

Please keep your receipt as proof of purchase for all warranty repairs.

Cautions:

Injury or material damage resulting from any kind of use that is not in accordance with the operating procedures explained in the Operating Instructions are the sole responsibility of the user.

The Snap Video Camera is designed for recording only.

To play back the recorded pictures, a Video Tape Recorder (optional) is necessary.

Recording Mode

The Snap Video Camera is designed for recording in the SP mode only.

Recording Format

The Snap Video Camera is designed for recording in VHS format only. It is possible to use an S-VHS-C video cassette for shooting. However, in this case, the recording will be made in the VHS format. Recording in the S-VHS format is not possible.

Sound Recording

The sound is recorded monaural.

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- To Shoot an Enlarged Subject
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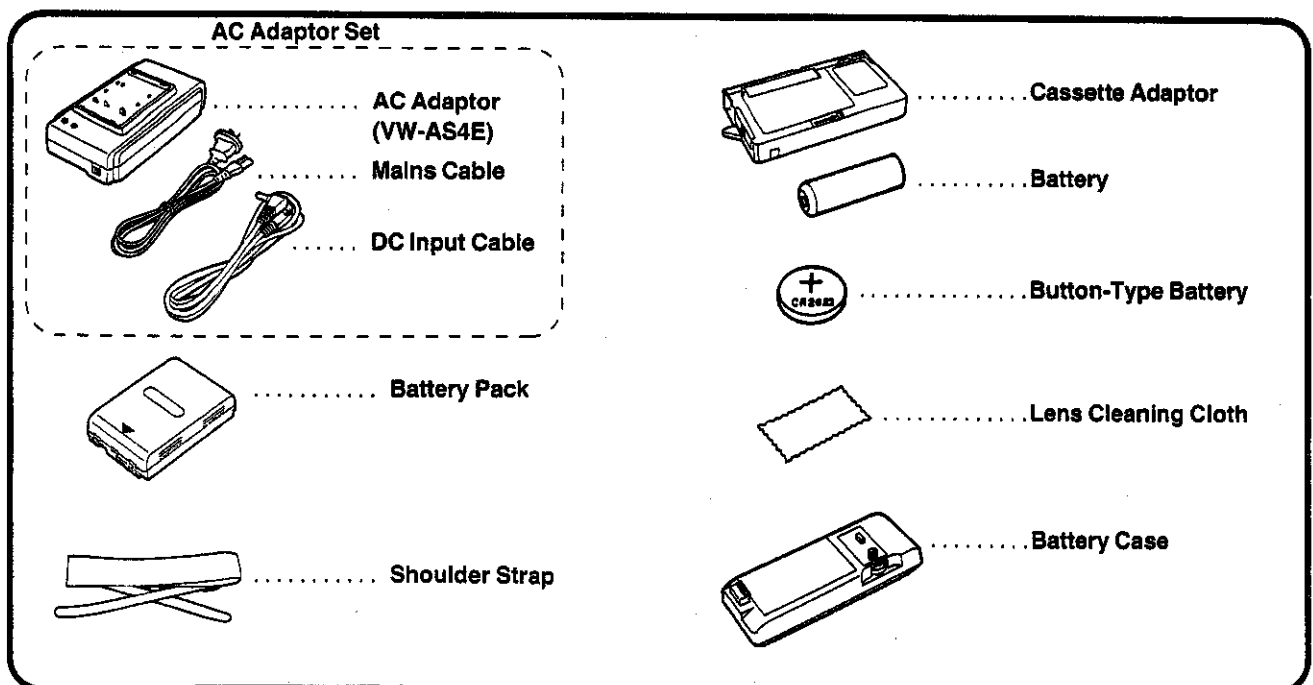
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Before Shooting

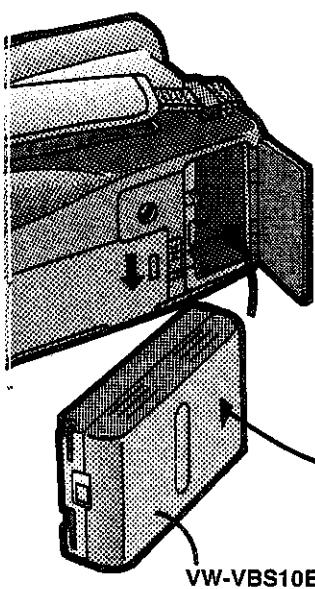
[POWER] Lamp

[CHARGE] Lamp
On: During charging
Off: Charging is finished but trickle charge is still active.

During charging do not connect the Snap Video Camera.

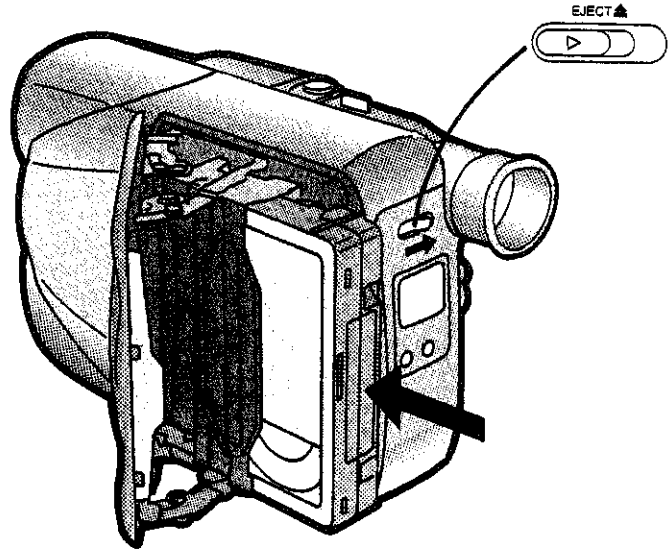
Be sure to insert the mains plug completely into the correct socket.

<p>To Charge the Battery Pack</p>		<p>1</p> <p>Attach Battery.</p>
<p>To Insert the Battery Pack</p>		<p>Slide.</p>
<p>To Remove the Battery Pack</p>		<p>Slide.</p>
<p>To Insert a Video Cassette</p>		<p>Slide.</p>



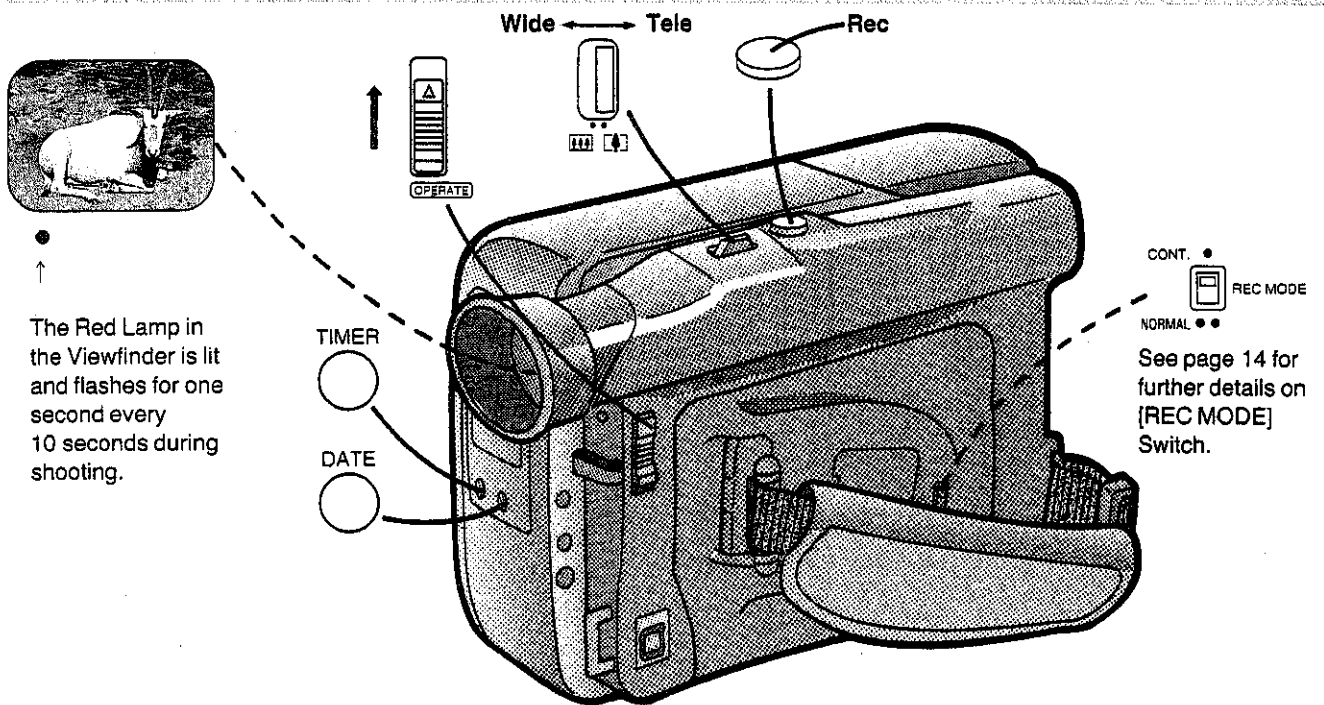
Insert the Battery Pack with the "▲" Mark facing downwards.

VW-VBS10E



2 →		3		Note									
<p>Plug into AC Adaptor.</p>	<p>Plug into mains.</p>	<table border="1"> <thead> <tr> <th>Battery Pack No.</th> <th>Charging Time</th> <th>Max. Shooting Time</th> </tr> </thead> <tbody> <tr> <td>VW-VBS10E</td> <td>approx. 50 min.</td> <td>approx. 70 min.</td> </tr> <tr> <td>VW-VBH10E</td> <td>approx. 60 min.</td> <td>approx. 80 min.</td> </tr> </tbody> </table>		Battery Pack No.	Charging Time	Max. Shooting Time	VW-VBS10E	approx. 50 min.	approx. 70 min.	VW-VBH10E	approx. 60 min.	approx. 80 min.	<p>To remove the Battery Pack Slide it in the opposite direction to step 1. (See page 8 for further details on battery charging.)</p>
Battery Pack No.	Charging Time	Max. Shooting Time											
VW-VBS10E	approx. 50 min.	approx. 70 min.											
VW-VBH10E	approx. 60 min.	approx. 80 min.											
<p>Insert.</p>	<p>Close.</p>	<p>●When you have finished shooting for the day, be sure to turn off the Snap Video Camera and take out the Battery Pack. (Even when the Snap Video Camera is turned off, it consumes a minimal amount of power from the Battery Pack and reduces its charge.)</p>											
<p>Push.</p>	<p>Close.</p>												
<p>Insert.</p>	<p>Push the [LOCK] Button.</p>	<p>Cog Wheel</p>	<p>●Before inserting the video cassette, make sure that the tape is tight. If it is loose, turn the cog wheel in the direction of the arrow to tighten it.</p>										

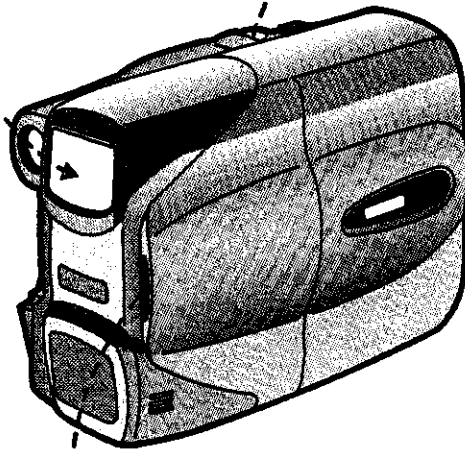
Shooting



			1
<p>To Shoot</p> <p>(1) Continuous Mode Set the [REC MODE] Switch to the "CONT." position.</p> <p>(2) Normal Mode Set the [REC MODE] Switch to the "NORMAL" position.</p>		<p>↑ Push upward.</p>	<p>Power-On Lamp is lit.</p>
<p>To Shoot an Enlarged Subject</p> <p>In the " [🌳] " setting, the subject will be enlarged 3 times compared with the " [👤] " setting.</p>			
<p>To Film Yourself (Self-Timer Function)</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> </div>			
<p>To Record the Date during Shooting</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>15. 10. 93</p> </div>	<p>(The Date Indication is not displayed in the Viewfinder.)</p>		

Before shooting, wipe the Lens Cover with the Lens Cleaning Cloth. (The Lens Cleaning Cloth is washable.)

When the shooting has been suspended (Snap Video Camera is in the Shooting Pause Mode) for more than about 6 minutes, the Snap Video Camera will automatically switch itself off to protect the tape and to save battery pack power.

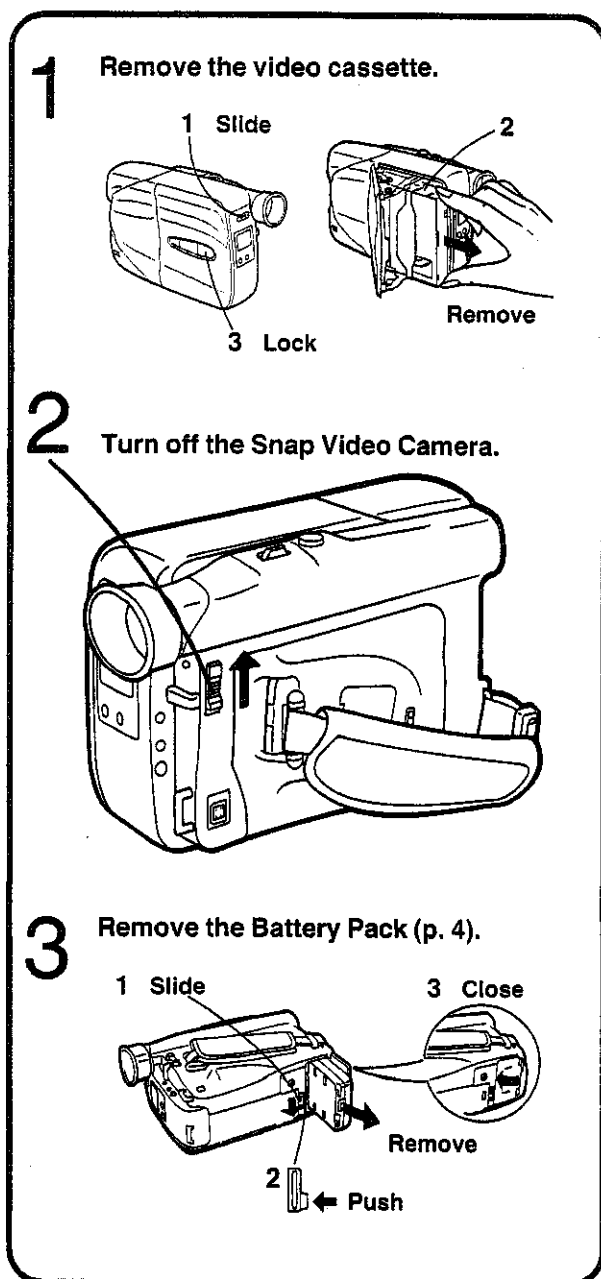


The Tally Lamp is lit during shooting.

Avoid the following shooting conditions
When shooting near a light source or towards the sun, reflection from these light sources will occur on the picture.

2	3	Note						
<p>(Continuous Mode) Keep pressed down. (Normal Mode) Press once.</p>		<p>To Stop Shooting</p> <ol style="list-style-type: none"> 1. Release the Record Button. (Continuous Mode) 2. Press the Record Button once. (Normal Mode) 3. Push the [OPERATE] Switch upwards. 						
<p>Slide. → Tele</p>	<p>The [REC MODE] Switch can be in either "CONT." or "NORMAL" Mode.</p>	<p>During shooting, it is not possible to change over between the wide-angle. " [Wide-Angle Icon] " and telephoto " [Telephoto Icon] " setting.</p> <p>Minimum Shooting Distance Wide-Angle: approx. 70 cm Telephoto: approx. 130 cm (These are rough estimates for practical use.)</p>						
<p>TIMER</p> <p>Press once.</p>	<p>Press once.</p>	<p>Red Lamp in the Viewfinder and Tally Lamp on the front of the Snap Video Camera</p> <table border="0"> <tr> <td>During Stand-by:</td> <td>Flashing (approx. 10 seconds.)</td> </tr> <tr> <td>During Shooting:</td> <td>On (approx. 10 seconds.)</td> </tr> <tr> <td>After Shooting:</td> <td>Off</td> </tr> </table> <p>To Cancel the Self-Timer Function Press the [TIMER] Button.</p>	During Stand-by:	Flashing (approx. 10 seconds.)	During Shooting:	On (approx. 10 seconds.)	After Shooting:	Off
During Stand-by:	Flashing (approx. 10 seconds.)							
During Shooting:	On (approx. 10 seconds.)							
After Shooting:	Off							
<p>DATE</p> <p>Press once.</p>	<p>The [REC MODE] Switch can be in either "CONT." or "NORMAL" Mode.</p>	<p>When the date has not been set, or when it is not correct, perform the operation described in "How to Set the Date and Time" on page 12.</p> <p>To Cancel the Date Indication Press the [DATE] Button again to make the Date Indication in the LCD disappear. ("-----" will be displayed.) (This operation can also be performed during shooting.)</p>						

After Use



Notes:

1. Be sure to remove the video cassette and the Battery Pack from the Snap Video Camera.
2. Store the Snap Video Camera in a place that is not exposed to large changes in temperature or to high humidity.
3. This Snap Video Camera is a high-precision instrument.
During long periods of non-use, it is recommended to turn it on from time to time to prevent malfunction.

Notes and Hints

1 Notes for Shooting


- If the Snap Video Camera is turned on without a video cassette inside, the Power-On Lamp flashes and about 10 seconds later, the Snap Video Camera will automatically switch itself off.
- Immediately after the Record Button is pressed, the Red Lamp in the Viewfinder starts to flash. While the Red Lamp is flashing, the shooting has not yet started. The actual shooting starts when the Red Lamp stops flashing.
- The recorded picture will be slightly larger than the picture seen in the Viewfinder. Also, the centre of the picture in the Viewfinder will not match exactly that of the recorded picture.
- When restarting the shooting after removing the video cassette and reinserting it, some picture distortion will occur during playback at the transition point between the previous and the new recording.

2 Notes for Using a tripod

- A tripod with a pin next to the screw designed for some Movie Cameras cannot be used. Use a tripod for photo cameras or an optional tripod (see back cover), which has collapsible pin.
- While the Battery Case is attached to the Snap Video Camera, it cannot be mounted on a tripod.

3 Hints for Optimum Charging

If the Battery Pack is left unused after charging, gradual self-discharging will occur. And if it is recharged repeatedly when not yet completely discharged, the "Memory Effect" will occur and the possible operation time becomes shorter. Therefore, pay attention to the following points before using the Battery Pack.

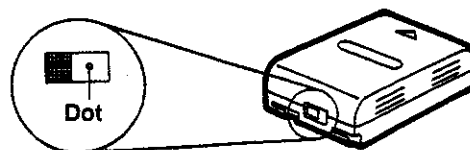
1. Use it until the "  " Indication in the LCD starts to flash.
2. Then recharge it completely.
(For optimum charge, continue charging for 2 hours after the [CHARGE] Lamp goes off.)

To recharge a Battery Pack which does not last very long, or which has been stored for a long period of time

Continue charging for 24 hours even after the [CHARGE] Lamp on the AC Adaptor has turned off.
(If this does not result in an operation time as specified, the Battery Pack has reached the end of its useful life. Replace it with a new one.)

Charging Confirmation Marker

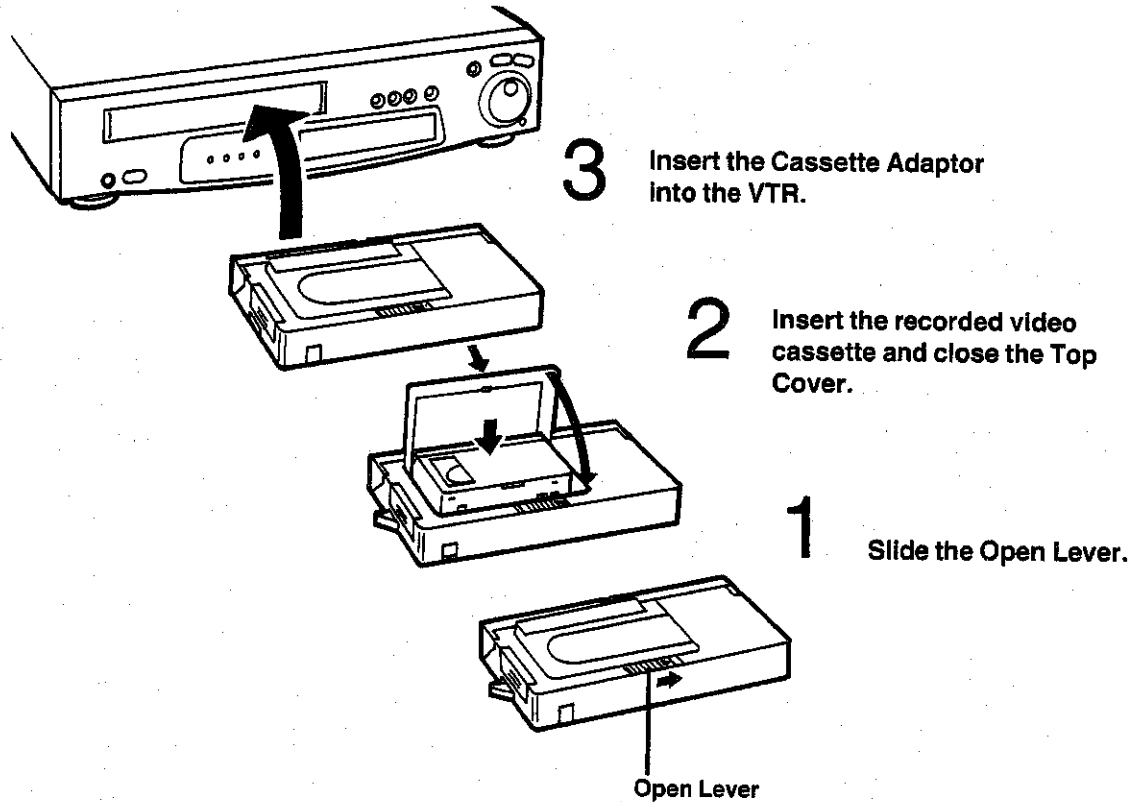
Use this marker to distinguish between charged and discharged Battery Packs. For example, slide the knob so that the dot is visible after the charging is completed.



How to Play Back on a "VHS" VTR

Using the Supplied Cassette Adaptor

Note: Ensure that battery is inserted into Cassette Adaptor.

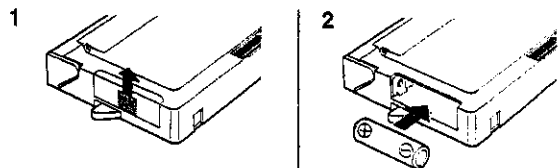


Notes:

1. For optimum picture quality, it may be necessary to adjust the tracking control on the VTR.
2. Never insert the empty Cassette Adaptor (without a video cassette) into a VTR.
3. Do not insert this Cassette Adaptor into a VTR and take it out again without running the tape, because this could loosen the tape.
4. When loading the video cassette tape into the Cassette Adaptor, do not touch the tape directly.
5. After use, take the video cassette out of the Cassette Adaptor.

To Insert the battery

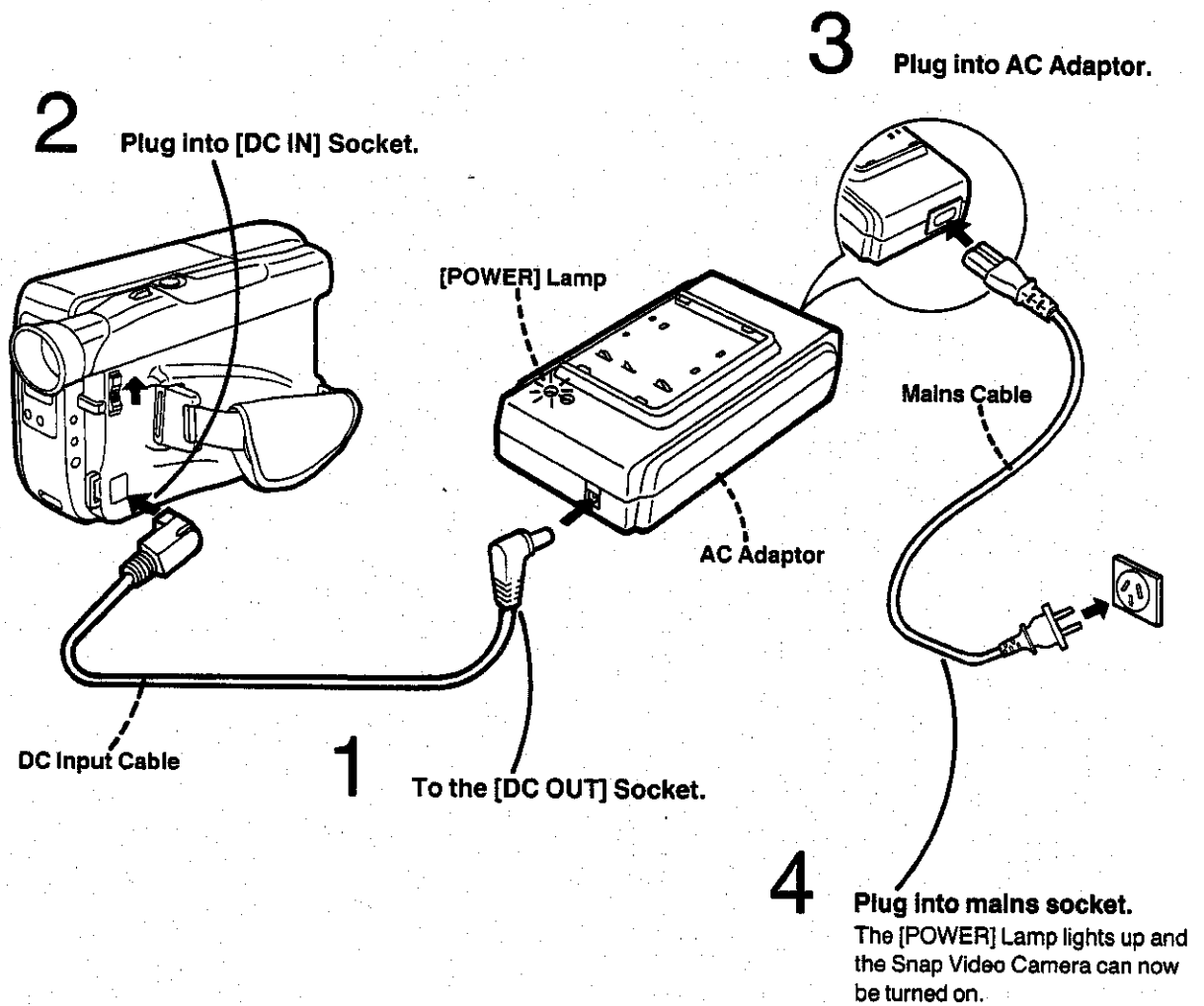
1. Push the Battery Compartment Cover upwards and remove it.
2. Insert the supplied battery, observing the polarity, and replace the Battery Compartment Cover.



Power Supply

1 How to Use the AC Adaptor (Supplied)

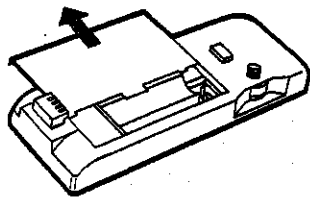
The Snap Video Camera may also be powered by the AC Adaptor.



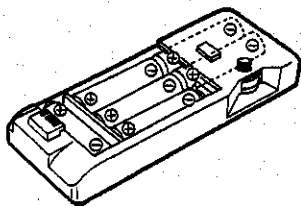
Notes:

- The AC Adaptor cannot power the Snap Video Camera and charge the Battery Pack at the same time.
- Do not connect the DC Input Cable to the AC Adaptor, when charging the Battery Pack. Otherwise the charge mode will not be activated.

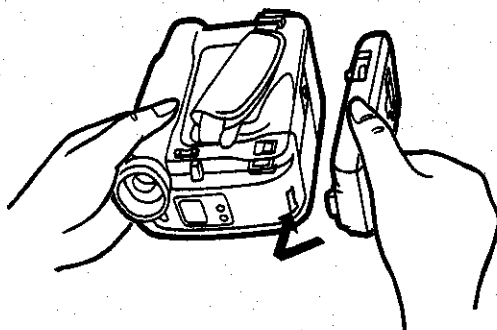
2 How to Use the Alkaline Dry Cell Battery Case (Supplied)



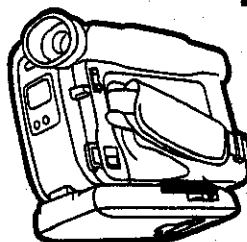
1 Open the Cover of the Battery Case.
Slide it in the direction of the arrow.



2 Load 6 Alkaline Dry Cell Batteries (optional) with their polarities (+ and -) aligned correctly and replace the cover.



3 Insert the Battery Case Connector into the socket.



4 Align the screw with the Tripod/Battery Case Receptacle and turn the thumb screw.

Note:
Do not overtighten.

To Remove the Battery Case

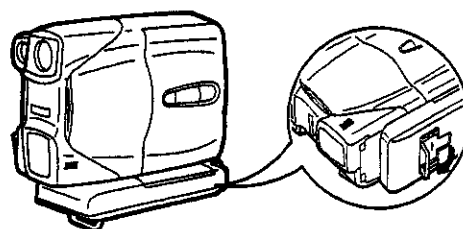
Perform the above steps in reverse order.

Alkaline Dry Cell Battery (optional)

- Use only alkaline dry cell batteries (e.g. Panasonic LR6). They provide a maximum time of approx. 60 minutes for continuous shooting when used at 25°C.
- If manganese or rechargeable Ni-Cd batteries are used, the maximum shooting time may be less than 60 minutes. Various brands of alkaline batteries may give varying maximum shooting time.

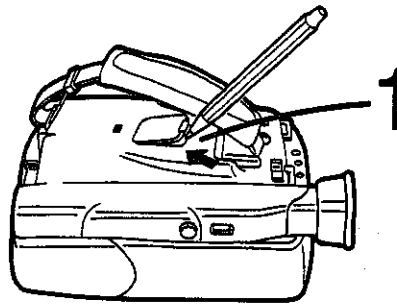
How to Use the Stand

The Stand on the bottom of the Battery Case makes it convenient to shoot with the Snap Video Camera placed on a flat surface.

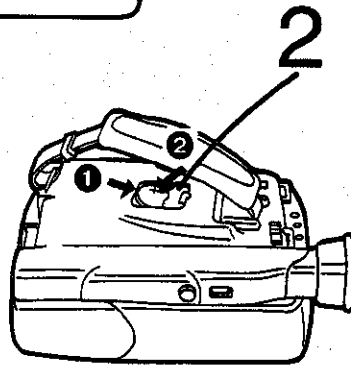


How to Set the Date and Time

1 How to Insert the Button-Type Battery (supplied)

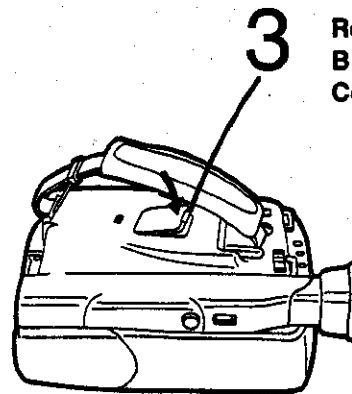


Remove the cover by pushing it with a pointed object such as a pen.



Insert the Button-Type Battery.

- 1 Insert it with the (+) mark facing upward.
- 2 Push it down until it sits firmly in place.



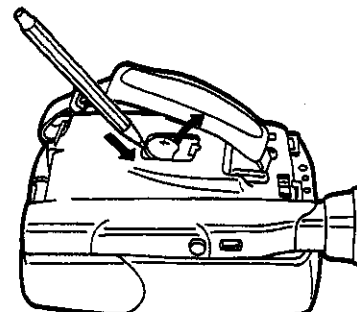
Replace the cover of the Button-Type Battery Compartment.

Notes:

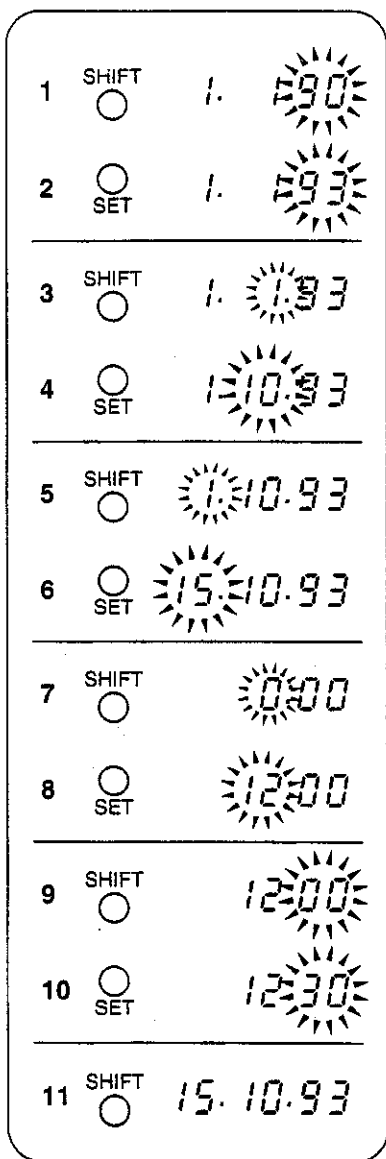
1. Before setting the date and time, be sure to insert the supplied Button-Type Battery.
2. Before replacing the Button-Type Battery, be sure to turn the Snap Video Camera on, otherwise the present date will be cancelled. (It is recommended to use the AC Adaptor as the power source for the duration of the battery replacement.)

To Remove the Button-Type Battery

1. Insert a pointed object under the battery.
2. Flick it out with a pen, do not use a metal object.



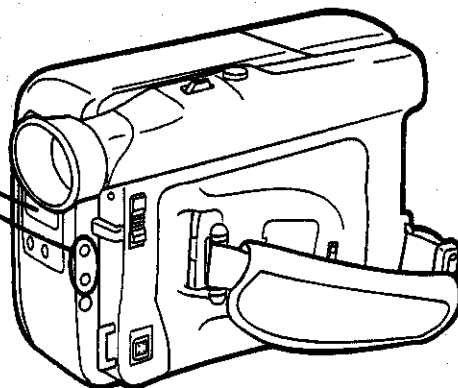
2 Setting the Date and Time



For example: To set the clock to 15th October, 1993, 12:30.

Before setting the date and time, insert a video cassette and turn on the Snap Video Camera.

- Push the [OPERATE] Switch upwards to turn the Snap Video Camera on.
- Use a pointed object, e.g. a pen, to press the [SET] or [SHIFT] Button down until it clicks.
 1. Keep the [SHIFT] Button pressed to make the "Year" portion flash.
 2. Set to "93".
 3. Press to make the "Month" portion flash.
 4. Set to "10".
 5. Press to make the "Day" portion flash.
 6. Set to "15".
 7. Press to make the "Hour" portion flash.
 8. Set to "12".
 9. Press to make the "Minute" portion flash.
 10. Set to "30".
 11. Press.
- The operation of the clock starts.
- The set date is displayed in the LCD.



Notes:

1. The time (hours and minutes) is not recorded during shooting with this Snap Video Camera. But setting the date and time is necessary to change the date automatically. Be sure to set the time correctly.
2. When setting the date and time, it is recommended to use the AC Adaptor as power source.

In Case of a Mistake during Setting
Restart from Step 1.

Changing the Figures of the Date/Time Indication

At every press of the [SET] Button, the Date/Time Indication can be changed in the following sequence. When keeping the [SET] Button pressed, the indication changes quickly.

Year: 90→91→92→93...99→00→01...89→90...

Month: 1→2→3→4→5...12→1

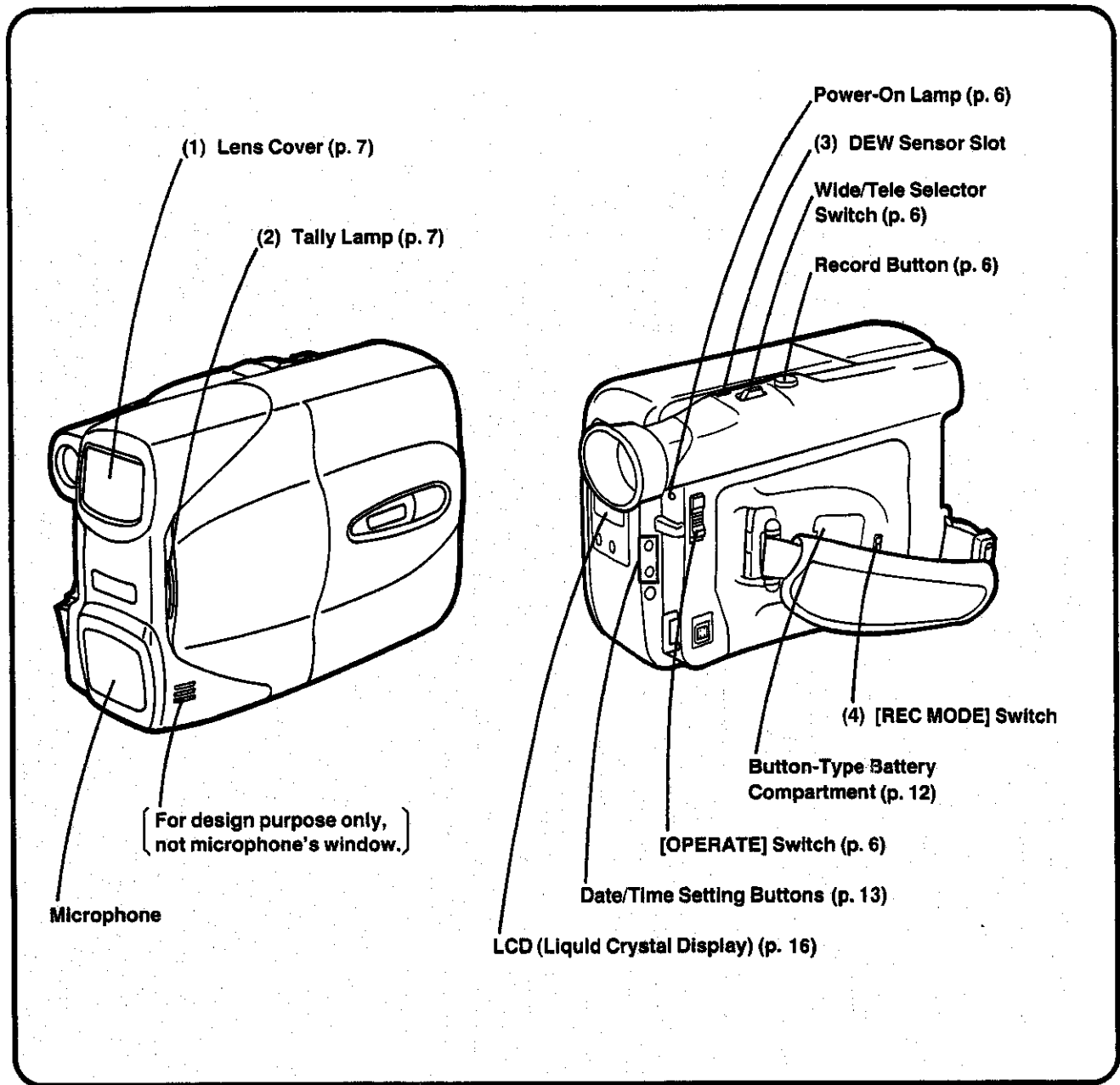
Day: 1→2→3→4→5...(31)→1

Hour: 0→1→2→3→4→5...23→0

Minute: 00→01→02→03→04...59→00

The "Year" indication is shown in as a 2-digit number in the LCD. However, even when the "Year" is shown as "93", the actual year indication "1993" is recorded.

Controls and Functions



(1) Lens Cover

Do not touch the transparent Lens Cover. Fingerprints, scratches, etc. can affect the picture quality. Wipe carefully before starting to shoot.

(2) Tally Lamp

This Lamp shows your subjects, when the camera is recording.

On: During Shooting

Flashing: During Standby in the Self Timer Mode

(3) DEW Sensor Slot

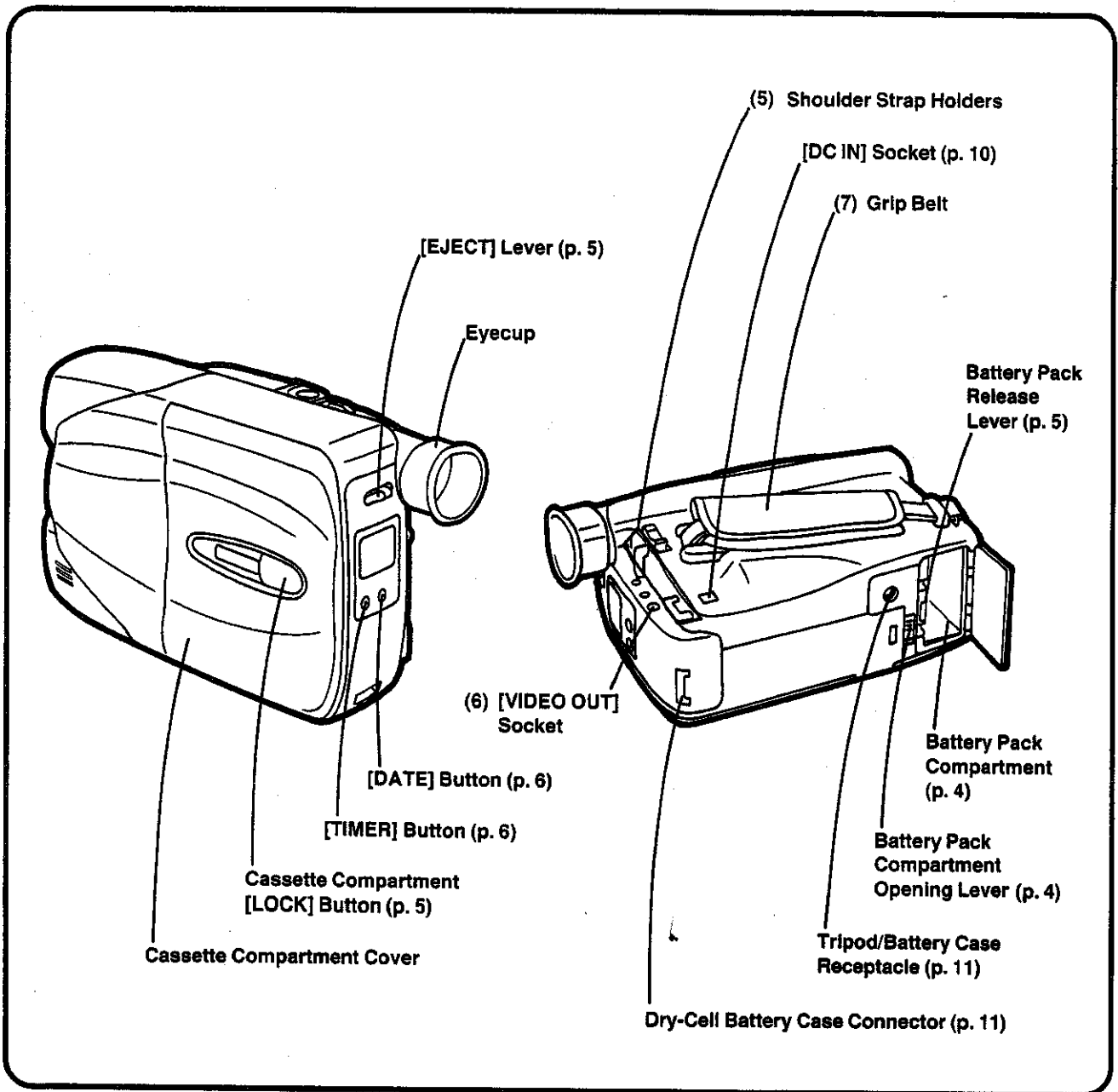
Through this slot, the Snap Video Camera detects condensation. Take care not to let this slot get clogged with dirt and not to cover it with your fingers, etc.

(4) [REC MODE] Switch

"CONT." = The Shooting continues only as long as the Record Button is kept pressed.

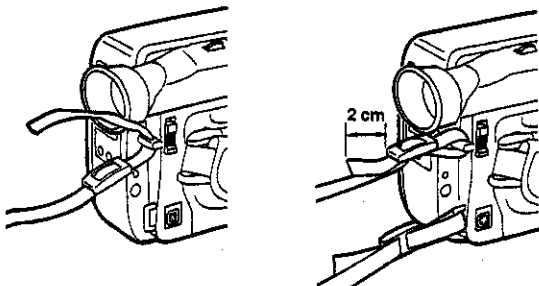
"NORMAL" = Pushing the Record Button starts the shooting.

Push the Record Button again to stop shooting.



(5) Shoulder Strap Holders

- Pull one end of the Shoulder Strap through the upper Shoulder Strap Holder and the other end through the lower one.
- Securely attach the end of the Shoulder Strap (more than 2 cm from the end of the Shoulder Strap should be protruding).

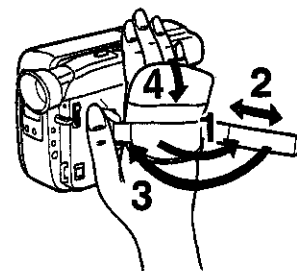


(6) [VIDEO OUT] Socket

Socket for service personnel only to monitor video signals. Do not use for dubbing because audio out is not available.

(7) Grip Belt

Adjust the length of the Grip Belt to your hand according to the steps shown in the illustration below.



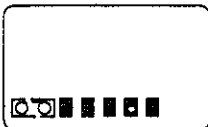
Indications in the Viewfinder and LCD



■ The Yellow Lamp Flashes in the Viewfinder

The flashing Yellow Lamp in the Viewfinder warns that one of the following conditions has occurred. To find out what condition has occurred, check on the LCD.

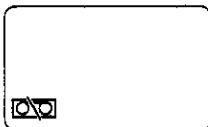
- The Battery Pack is exhausted.
- Condensation has formed inside the Snap Video Camera.
- The video heads are dirty.
- There is no video cassette in the Snap Video Camera.
(Or the safety tab of the inserted video cassette is broken.)
- The tape has almost reached its end.



■ Indications in the LCD

Remaining Tape

As the remaining tape length decreases, the "■" Indications disappear one after another from the right side. (While the remaining tape length is initially detected, the " ■ ■ ■ ■ ■ " Indication flashes.)

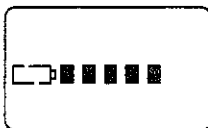


- When the " ■ ■ ■ ■ ■ " Indication flashes, the tape has almost reached its end. (Replace the video cassette with another one.)

● When the " ■ ■ ■ ■ ■ " Indication flashes alone and the Snap Video Camera turns off:

- (1) The tape has reached its end.
- (2) There is no video cassette inserted.
- (3) The safety tab of the inserted video cassette is broken.

- When the video cassette is first inserted, the Remaining Tape Length Indication is not displayed until shooting is started, and it will turn off when the video cassette is ejected.



Remaining Battery Power

As the capacity of the Battery Pack decreases, the "■" Indications disappear one after another from the right side.

- "■" Indications may reduce soon after shooting starts, depending on battery discharge condition.



Low Battery Warning

- When the " ■ ■ ■ ■ ■ " Indication flashes, the Battery Pack is almost exhausted. Replace it with a fully charged Battery Pack.

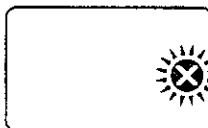
(However when using alkaline batteries (e.g. Panasonic LR6), the Indication " ■ ■ ■ ■ ■ " may start flashing sooner than expected, i.e. after 20 or 30 minutes of shooting, but shooting can last for another 30 or 40 minutes. This is due to variation in the quality of batteries.)

- When all the "■" Indications have disappeared, the Battery Pack is completely exhausted.



Condensation

Condensation has formed inside the Snap Video Camera. (p. 18)



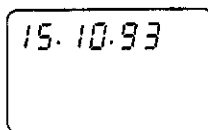
Video Head Clogging

The video heads are dirty. (p. 18)



Self-Timer

This indication appears when the [TIMER] Button is pressed. When shooting begins by pressing the Record Button, it begins to flash. When the Self-Timer Shooting is finished, it goes out.



Date

When the [DATE] Button is pressed and the Date Indication appears, it will be recorded during shooting. When this button is pressed again, the " --- --- " Indication appears, and the Date will no longer be recorded during shooting.

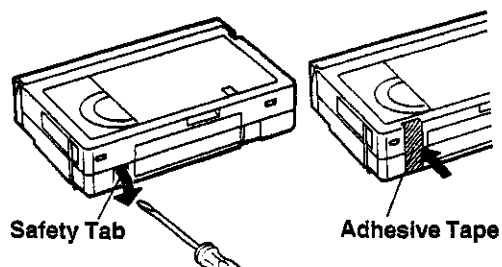
When the Date or " --- --- " Indication flashes, the Button-Type Battery is almost exhausted.

Before Requesting Service

	Symptom	Cause	Action	Page
Power	<ul style="list-style-type: none"> •The Snap Video Camera cannot be turned on. 	<ul style="list-style-type: none"> •The Battery Pack is not inserted correctly. •The AC Adaptor is not connected correctly. •The Battery Case is not attached correctly. 	<ul style="list-style-type: none"> •Insert it correctly 	4
			<ul style="list-style-type: none"> •Connect it correctly. 	10
			<ul style="list-style-type: none"> •Attach it correctly. 	11
	<ul style="list-style-type: none"> •The Snap Video Camera switches off by itself. 	<ul style="list-style-type: none"> •The Snap Video Camera was left in the Shooting Pause Mode for more than about 6 minutes. 	<ul style="list-style-type: none"> •Turn on the Snap Video Camera again. 	7
	<ul style="list-style-type: none"> •The Snap Video Camera switches off soon after turning on. 	<ul style="list-style-type: none"> •There is no video cassette in the Snap Video Camera. •The Battery Pack is exhausted. •Condensation has formed inside the Snap Video Camera. 	<ul style="list-style-type: none"> •Insert a video cassette. •Use a fully charged one. •Wait until the " [] " Indication disappears. 	4 4 18
Shooting	<ul style="list-style-type: none"> •The Battery Pack becomes exhausted very quickly. 	<ul style="list-style-type: none"> •The Battery Pack is not charged sufficiently. •The Battery Pack is used at low ambient temperature. •The Battery Pack has reached the end of its life. 	<ul style="list-style-type: none"> •Charge it sufficiently. 	8
			<ul style="list-style-type: none"> •At low ambient temperature, the operation time of the Battery Pack is reduced. •Use a new Battery Pack. 	19 —
Date	<ul style="list-style-type: none"> •A video cassette is inserted, but shooting is not possible. 	<ul style="list-style-type: none"> •The safety tab of the video cassette is broken. •The tape has reached its end. 	<ul style="list-style-type: none"> •Cover the tab hole with adhesive tape. (See the hints at the bottom of this page.) •Rewind the tape on a VTR or use a new video cassette. 	— —
	<ul style="list-style-type: none"> •The date does not change precisely. 	<ul style="list-style-type: none"> •The time was not set correctly. 	<ul style="list-style-type: none"> •Set the time correctly. (However, the time is not displayed and recorded.) 	13
	<ul style="list-style-type: none"> •The set date is erased. 	<ul style="list-style-type: none"> •The Button-Type Battery is exhausted. •No Button-Type Battery was inserted at the time of setting the date. •The Button-Type Battery was replaced while the Snap Video Camera was turned off. •Press the [DATE] Button so that the "-----" Indication appears in the LCD. 	<ul style="list-style-type: none"> •Replace it with a new Button-Type Battery. •Insert the Button-Type Battery and set the date and time. •Set the correct date and time again. •Press the [DATE] Button again to make the Date Indication appear in the LCD. 	12 12 13 6
Others	<ul style="list-style-type: none"> •All Buttons and Switches (with the exception of the Cassette Eject Lever) are non-operational. 	<ul style="list-style-type: none"> •Condensation has formed inside the Snap Video Camera. 	<ul style="list-style-type: none"> •Wait until the " [] " Indication disappears. 	18

Hints for Using the Video Cassette

To protect a recording against accidental erasure, break off the safety tab of the video cassette with a screwdriver (some video cassettes have sliding-type tabs). This makes it impossible to record on this video cassette. To be able to record again on a video cassette whose safety tab has been removed, cover the hole with two layers of adhesive tape to replace for the broken-off tab.



Cautions

Cautions for the Snap Video Camera

In case of abnormal operation of the Snap Video Camera (e.g. If it emits smoke or some unusual smell), immediately switch it off and consult qualified service personnel.

- When a thunderstorm approaches, stop using it. (If the AC Adaptor is being used, disconnect it from the mains outlet.)
- Do not aim the Lens at the sun. (This could seriously damage your eyesight.)
- Do not use it in places with high temperature and high humidity.
- Do not use it in the water or in places where water or some other liquid could splash on it. (If it is accidentally dropped into the water while the AC Adaptor is being used, disconnect it from the mains outlet.)
- Do not use it with the cassette compartment facing down. (This could cause uneven winding of the tape.)
- Do not insert or remove the video cassette in dusty places.
- Do not disassemble or reconstruct it.
- Do not subject it to strong vibrations or shocks. (Handle it with care to prevent accidentally dropping it.)
- Do not insert any foreign objects into the Snap Video Camera nor spill water into it.
- Do not use it near magnets or magnetized objects.
- Do not use it in areas with strong electric fields. (This could affect the picture quality.)
- Do not operate it near a TV set or a radio. (This could distort the picture and sound reception of the TV set.)
- Do not use it in places with steam or oily smoke.
- Do not use benzine, thinner or other chemicals for cleaning, because they could change the colour and damage the surface of the camera body.
- Wipe the Snap Video Camera with a clean, dry cloth. Never use cleaning fluids or other chemicals. (Before cleaning the AC Adaptor, make sure that it is disconnected from the mains outlet.)

Do not store this Snap Video Camera in the following places.

- Places exposed to direct sunlight.
- Places with high temperature and high humidity (e.g. in a closed car or in a bathroom).
- Near heaters.
- Keep it out of reach of children.


Cautions for Transport

When not actually shooting, carry it in the specially designed Carrying Case (optional). Keep the packing materials for use when transporting it in the future.


Caution for Condensation

If condensation has formed inside the Snap Video Camera, shooting is not possible.

When the following symptoms occur, condensation has formed.

1. The Condensation Indication "  " in the LCD flashes. (After this indication flashes for a few seconds, the Snap Video Camera will automatically turn itself off.)
2. When turning on the Snap Video Camera, it turns off again shortly. (The Snap Video Camera may also turn itself off for the following two reasons: The Battery Pack is exhausted, or there is no video cassette inserted.)

Remedy

1. Wait a few hours before operating the Snap Video Camera again. (The actual time depends on the surrounding conditions.)
2. Turn on the Snap Video Camera.
3. Confirm that the Condensation Indication "  " is not displayed any more.
4. For added safety, wait for 1 hour.

Remarks about Condensation

- Condensation can form when the Snap Video Camera is suddenly brought from cold surroundings to a place which is hot or humid.
- Since condensation forms gradually, there may be some condensation inside the Snap Video Camera even before the Condensation Indication begins to flash.
- In an extremely cold place, condensation may freeze and turn into frost. As the Snap Video Camera cannot detect frost, the Condensation Indication does not appear until the frost melts and turns into dew.


Precautions against Condensation

When moving it from a very cold place to a very warm place, keep it in a tightly closed plastic bag or similar to prevent condensation from forming.

Cautions for Video Head Clogging

If the video heads become clogged with dirt, shooting clean pictures is no longer possible.

When the following symptoms occur, the video heads are clogged.

1. The "  " Indication in the LCD flashes. (When shooting immediately after replacing the video cassette, this indication may disappear temporarily.)
 2. When a video cassette recorded on the Snap Video Camera while the video heads are clogged is played back on a VTR, noise bars will appear in the playback picture.
- When the video heads are excessively clogged, the Snap Video Camera's recording and playback capacity is impaired. When the above symptoms occur, consult qualified service personnel.
 - It is not recommended to use head cleaning tapes in this Snap Video Camera, because they may cause damage or the tape may become stuck. The removal of head cleaning tape is not covered by warranty.

Cautions for the Battery Pack

- When charging the Battery Pack, disconnect the DC Input Cable from the AC Adaptor.
- Do not recharge the Battery Pack when it is already fully charged.
- At low temperature, the operating time becomes considerably shorter.
- At low temperature, the Battery Pack cannot be fully charged. Therefore, it is recommended to charge it at an ambient temperature between 10°C and 35°C.
- For charging, be sure to use only the specially designed AC Adaptor or Battery Charger.
- When the operation time, even after charging, is too short for normal use, the service life of the Battery Pack has reached its end. (It can be charged approx. 200 times.)
- During use, it may become warm. However, this is normal and not a malfunction.
- Do not throw the exhausted Battery Pack into a fire.
- Do not leave it in places with high temperature, e.g. exposed to direct sunlight.
- Make sure that no metal objects touch the contacts of the Battery Pack. (When carrying it in a bag or similar, take care that keys, coins, etc. do not come into contact with it.)
- Do not try to disassemble or reconstruct it.

Cautions for the AC Adaptor


- Before connecting the AC Adaptor to a mains outlet, confirm that the voltage and frequency on the rating plate match the local AC mains voltage and frequency. (The AC Adaptor can be used within a voltage range of AC 100 V–240 V, and a frequency of 50 or 60 Hz.)
- Do not use it for any purpose other than supplying the Snap Video Camera with power or charging the Battery Pack.
- Do not operate it very close to a radio. (The radio reception may be distorted.)
- When unplugging the mains cable, pull it by the plug, not by the cable.
- Do not bend the cables excessively.
- Do not expose the cables to high temperature and chemicals.

Cautions for the Button-Type Battery

Since there is danger of explosion if the Button-Type Battery is incorrectly used, pay attention to the following points.

- Insert it with its polarities (+ and –) aligned correctly.
- Do not try to short-circuit, recharge, disassemble or heat it.
- If it has leaked inside the Snap Video Camera, wipe the inside of the Battery Holder clean. Then insert a new battery (CR 2032). (Be sure to use only the same or an equivalent type of Button-Type Battery as recommended by the equipment manufacturer.)
- Keep it out of reach of children.

Cautions for the Alkaline Dry Cell Battery Case



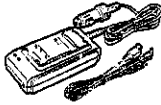
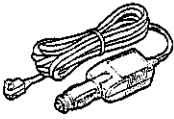

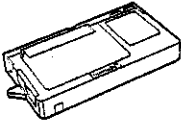
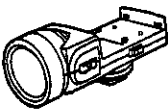
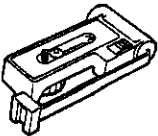
- When not actually using the Snap Video Camera, be sure to remove the Battery Case. (When the Battery Case is left attached to the Snap Video Camera, it consumes a minimal amount of power from the inserted alkaline dry batteries and reduces their capacity.)
- When the Battery Case is used, the Remaining Battery Power Indication " ■■■■■ " flashes slowly in the LCD.
- When both the Battery Case and the Battery Pack are used at the same time as power source, the alkaline dry batteries are automatically used after the Battery Pack has become completely exhausted. At that time, the "  " Indication flashes for several minutes to show that the Battery Pack is exhausted. This indication has no relation to the state of the alkaline dry batteries in the Battery Case.
- Keep the connectors of the Battery Case clean. If they become dirty, wipe them with a soft cloth.
- At low temperature, the operating time becomes considerably shorter. When used in very cold surroundings, it may not be possible to turn on the Snap Video Camera.
- The Battery Case may become warm during use. However, this is normal and not a malfunction.
- Do not drop the Battery Case or subject it to other strong shocks and vibration.
- When batteries have leaked inside the Battery Case: Carefully wipe the inside of the Battery Case clean before inserting new batteries.
- Do not try to disassemble or reconstruct it.

General Cautions for the Batteries

To prevent leaking and bursting of the batteries, pay attention to the following points:

- Load them with their polarities (+ and –) aligned correctly.
- Do not mix new and old batteries together.
- When the Battery Case is not going to be used for a long period of time, be sure to remove the batteries from it.
- Do not dispose of any exhausted battery (Battery Pack, Button-Type Battery or alkaline batteries) together with your regular household waste. When purchasing a new battery, consult your dealer about disposing of the old battery.

Optional Accessories

Battery Pack VW-VBS10E VW-VBH10E 	System Case VW-SHCS5E 	Car Battery Charger VW-KBC2E 
Car Battery Cord VW-ACC2E 	Standard Tripod VZ-CT55E 	Cassette Adaptor VW-TCA7E 
Video DC Light VZ-LDCS13E 	Shoe Adaptor VW-SK9E 	

•When using the Video DC Light, the Shoe Adaptor (optional) is necessary.

Battery Pack No.	Charging Time	Max. Shooting Time
VW-VBS10E	approx. 50 min.	approx. 70 min.
VW-VBH10E	approx. 60 min.	approx. 80 min.

Specifications

Snap Video Camera Information for your safety

Power Source: Battery Pack: 4.8 V
 AC Adaptor: 6.0 V
 Battery Case: 9.0 V
 Power Consumption: 4.7 W (Battery Operation)

Video Recording

System Rotary Four-Head Helical Scanning System
 Tape Speed 23.39 mm/s
 Tape Format VHS-C
 Recording Time 45 min with NV-EC45XG

VIDEO

Television System CCIR; 625 lines, 50 fields PAL colour signal
 Modulation System .. Luminance: FM Azimuth Recording
 Colour signal: Converted Subcarrier Phase Shift Recording
 Image Sensor 1/3-inch CCD Image Sensor
 Lens Focal Length: 4 mm (Wide)
 12 mm (Tele)
 F2.7 (Wide)/F3.1 (Tele)
 Auto Iris
 Viewfinder Optical Viewfinder
 Standard
 Illumination 1400 lux
 Minimum required
 Illumination 7 lux
 Operating
 Temperature 0°C–40°C
 Operating Humidity 10%–80%
 Weight Approx. 600 g
 (without Battery Pack)
 Dimensions Approx. 71 (W) × 114 (H) × 188 (D) mm

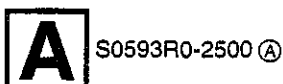
AC Adaptor

Information for your safety

Power Source: AC 100–240 V, 50–60 Hz
 (Automatic voltage adjustment)
 Power Consumption: 25 W
 DC Output: DC 6 V, 11.8 W
 (Movie Camera operation)
 DC 4.8 V, 1.6 A
 (Battery Pack charging)

Weight Approx. 240 g (without AC Cable)
 Dimensions Approx. 72 (W) × 39 (H) × 143 (D) mm

Weight and dimensions shown are approximate.
 Specifications are subject to change without notice.



Printed in Japan
 VQT5328

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 Central P.O. Box 288, Osaka 530-91, Japan